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CASE REPORT

Large Iliac Venous Aneurysm Simulating a Retroperitoneal Soft Tissue Tumour

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Introduction

There are only a few reports in the literature on iliac venous aneurysms. Such an aneurysm may be asymptomatic for a long period of time, but, if thrombosis occurs, pulmonary embolism, obstruction of lower extremity venous return, or symptoms of compression to the adjacent structures may be the first clinical signs.

We report a case of a large thrombosed saccular iliac venous aneurysm that presented as a retroperitoneal tumour during laparotomy for suspected appendicitis in a young male. The role of magnetic resonance imaging in the diagnostic procedure is emphasised.

Case Report

A 19-year-old male was operated on because of pain and tenderness in the right lower part of the abdomen. A soft retroperitoneal mass was found during laparotomy, extending from the level of umbilicus to the bladder. Needle aspiration revealed venous blood. On the second postoperative day oedema of the left lower limb occured.

A venogram showed lack of filling of the entire iliofemoral venous system of the left leg. CT scan revealed a thrombosed cystic vascular formation in the position of the right common iliac vein. The left common iliac vein was thrombosed and dilated to 2.5 cm in diameter. For more precise diagnosis magnetic resonance imaging (MRI) was performed. MRI confirmed a venous cystic malformation, localised medially to the right common iliac vein, 89 mm in longitudinal and 45 mm in transverse diameter, extending from the level of 4th lumbal to the 2nd sacral vertebrae (Fig. 1).

At operation, a thrombosed saccular aneurysm of the left common iliac vein was found, with a narrow lumen (2.5 cm in longitudinal and 0.5 cm in transverse diameter) between the iliac vein and the aneurysm (Fig. 2). The aneurysm was resected and the iliac vein defect repaired laterally with continuous 4-0 prolene suture.

Microscopy showed a thin medial layer of an aneurysmal wall, with granulation tissue and clot near the intima.

Postoperatively, the patient was continued on heparin, and discharged on the 14th postoperative day

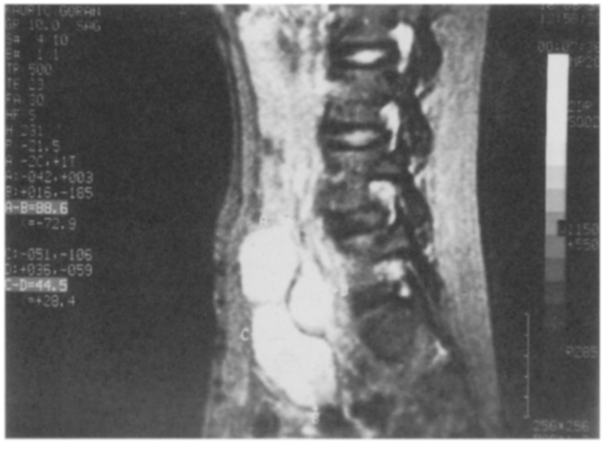

Fig. 1. Magnetic resonance imaging showing the form, extension and location of the iliac venous aneurysm. A–B = longitudinal diameter; C–D = transverse diameter.

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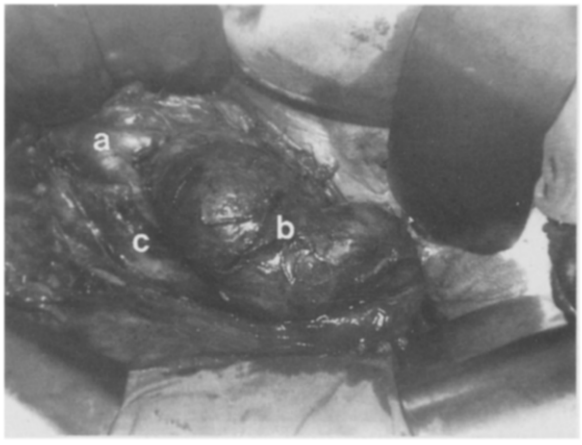

Fig. 2. Intraoperative finding: (a) aortic bifurcation, (b) venous aneurysm, (c) right common iliac vein.

with markedly reduced oedema of the left lower extremity. Follow-up at 12 months was without significant postoperative complications.

Discussion

As a possible cause of venous aneurysm different conditions such as trauma, inflammation, congenital weakness of the venous wall, localised degenerative changes and outer compression of the vein, have been described.[1,6] Taking into account the age of our patient, absence of trauma, form and microscopic finding of aneurysmal wall, we suggest a congenital origin of the aneurysm in this particular case.

Clinical presentation depends mainly on the extent and location of an aneurysm.[6] Possible complications such as pulmonary embolism or deep vein thrombosis may be the first manifestation.[1,3] We presume that manipulation during the first operation in this young male, in combination with needle puncture of the retroperitoneal mass, led to thrombosis. Such a thrombosed aneurysm could have caused the compression of the left common iliac vein and obstruction of the venous return from the left lower extremity.

CT scan and venogram did not give enough information about the nature of the process. MRI gave a clear visualisation of the process, including the form, location, extension and precise dimensions as well as relation to the adjacent structures. Various operative procedures have been proposed for venous aneurysms.[1,2,6] In our case, because of the narrow lumen between the aneurysm and the left common iliac vein, resection was followed by simple lateral repair of the left common iliac vein.

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